

# RESERVE COPY

## PATENT SPECIFICATION

417,413

Application Date: Sept. 6, 1933. No. 24,648/33.

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PROVISIONAL SPECIFICATION.



### Improvements in and relating to Domestic Fires and to Simulating the Appearance of Burning or Glowing Fuel therein.

We, A. BELL AND COMPANY LIMITED, a British Company, and NORMAN MINDHAM BELL, a British Subject, both of Kingswell Works, Kingswell Street, Northampton, in the County of Northampton, do hereby declare the nature of this invention to be as follows:—

This invention relates to domestic fires and to simulating the appearance of burning or glowing fuel therein.

According to the present invention a fuel block is made up by the use of a piece or pieces of real fuel embedded or set in a foundation or bed of hard-setting material such as plaster or cement.

The natural fuel used for this purpose may be coal, coke, anthracite, wood blocks, logs or the like.

The fuel may be partly burned before being set in position.

The fuel may be coloured or treated to impart thereto a glowing or flaming appearance.

Natural ash, cinders or materials of similar appearance may be applied to the surface of the foundation between the pieces of fuel.

The foundation may be pierced to allow for the passage of light or illumination from beneath it.

The fuel block may be flood-lighted from the front when placed in position in a fireplace.

In carrying out the invention according to one example of construction pieces

of coal or other fuel are embedded in a foundation of cement, plaster or other hard-setting material the foundation being of such size and shape as to fit in the space or open fire intended to receive it. Ash and small cinders are then sprinkled on the surface of the foundation while it is still sufficiently plastic for them to adhere thereto and the foundation is freely pierced in any convenient manner. The ash and small cinders are deposited between the pieces of fuel to give the appearance of the latter being partly burned, and the pieces of fuel themselves may be partly consumed before being set in position. To imitate flame parts of the fuel are painted or coloured red interspersed with a certain amount of gold. When the completed block is placed in position a source of illumination is disposed underneath it, the light from which shines through the holes in the foundation and the block is further flood-lighted from the front.

The invention provides an extremely natural and pleasing simulation of a burning or glowing fire suitable for use in connection with various forms of electric or other fires for domestic heating purposes.

Dated this 5th day of September, 1933.  
W. SWINDELL & SON,  
Agents for the Applicants,  
53, Queen Street, Derby.

### COMPLETE SPECIFICATION.

### Improvements in and relating to Domestic Fires and to Simulating the Appearance of Burning or Glowing Fuel therein.

We, A. BELL AND COMPANY LIMITED, a British Company, and NORMAN MINDHAM BELL, a British Subject, both of Kingswell Works, Kingswell Street, Northampton, in the County of Northampton, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described

[Price 1/-]

and ascertained in and by the following statement:—

This invention relates to domestic fires and to simulating the appearance of burning or glowing fuel therein.

Suggestions have previously been made to provide a "fuel" consisting of irregular pieces of variously tinted glass

or other suitable material interspersed with irregularly shaped pieces of coal, coke or both; these pieces being held together by means of a cement or other suitable adhesive to form a sheet to represent the front and upper surface of the fire, irregular apertures through which a source of light shines being left between some of the pieces of coal and glass or other materials forming the sheet. It has also been proposed to form an imitation fire comprising an illuminating agent, a flicker-producing device and imitation fuel formed of slab-like pieces of coloured moulded glass carrying other material such as pieces of coke, coal or the like more or less embedded therein.

According to the present invention a fuel block comprises a foundation of hard setting cement, plaster or the like formed of a size and shape to fit into and rest in a fireplace bottom or imitation fire space and into the upper surface of which pieces of coal, coke or wood have been set while the foundation was still plastic, the block having holes through which shines a source of illumination.

The block is preferably made with a bottom cradle or base and a cap capable of resting upon it.

A source of illumination such as a red or pink coloured lamp is preferably arranged in the cradle extending under the cap and shining through holes or crevices in the latter.

The cradle and the underside of the cap may be coloured pink or red.

The cap may be reinforced by wire netting or other material.

The blocks may be made by forming the bottom in a mould conforming to the shape of the fireplace or space the block is intended to occupy and after setting the fuel in position therein piling a sand or like bed over it and moulding the cap on the sand bed.

The fuel may be partly burned before being set in position.

The fuel may be coloured or treated to impart thereto a glowing or flaming appearance.

Natural ash, cinders, coal dust or materials of similar appearance may be applied to the surface of the foundation between the pieces of fuel.

The invention will now be described with reference to the accompanying drawings wherein:

Figure 1 is a vertical section through a fireplace with a fuel block positioned therein.

Figure 2 is a perspective view thereof showing the cap or upper part of the fuel block removed from the base thereof.

Figure 3 is a similar view to Figure 2

but showing the cap or upper part of the fuel block in position.

It will be understood that the fuel blocks will more often be used in connection with electric fires or radiators of various types; they are, however, useful for filling ordinary coal fireplaces during periods when no fires are required, as in warm weather; thus used the fuel block gives the appearance of a coal fire without giving off heat. The drawings show a fuel block used in this way, the fireplace used being of the sunk or hearth type devoid of metal grates or firebars.

The fireplace comprises a surround and hearth 11 with blocks 12 forming the fire proper and the usual fireback 13 and side cheeks 14. On the rear blocks 12 a fuel block is placed. The block consists of a foundation or base 20 of cement, plaster or other hard-setting material the base being of such size and shape as to fit in the space enclosed by the back 13 and cheeks 14. Pieces of coal, coke, logs or like real fuel 21 are placed around the base 20 while it is sufficiently plastic for them to be set in position and coal dust, ashes, small cinders or the like are deposited between the pieces of fuel to give the appearance of the latter being partly burned; the pieces of fuel themselves may be partly consumed before being set in position. To imitate flame parts of the fuel may be painted or coloured red interspersed with a certain amount of gold. A red or pink electric lamp 22 is disposed at the back of the base 20 and held in position by metal members 23. The centre of the base 20 is dished or concave in form as at 24.

An upper member or cap is supported over the base member 20 and may be moulded by piling sand on the latter to the required extent to form a bed for the cap. The cap comprises a hard-setting layer 30 reinforced by wire netting or the like 31 and having pieces of fuel 32 embedded therein on the upper surface similar to those 21 around the base member 20, so that when the cap is placed in position the pieces of fuel 21 surround those 32 and the joint between the cap 30 and base 20 is not visible. The cap 30 has a number of holes or crevices therein through which light from the lamp 22 shines when it is switched on. The underside of the cap 30 and the dished part 24 of the base are coloured pink or red. The pieces of fuel on the cap may be partly consumed, coloured and/or sprinkled with coal dust or the like in the same way as those round the base member.

The invention provides an extremely natural and pleasing simulation of a

burning or glowing fire suitable for use in connection with various forms of electric or other fires for domestic heating purposes.

5 Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

10 1. A fuel block comprising a foundation of hard setting cement, plaster or the like formed of a size and shape to fit into and rest in a fireplace bottom or imitation fire space and into the upper  
15 surface of which pieces of coal, coke or wood have been set while the foundation was still plastic, the block having holes through which shines a source of illumination.

20 2. A fuel block according to Claim 1 wherein the fuel block is made with a bottom cradle or base and a cap capable of resting upon it.

25 3. A fuel block according to Claim 2 wherein a source of illumination such as a red or pink coloured lamp is arranged in the cradle extending under the cap and shining through holes or crevices in the latter.

30 4. A fuel block according to Claim 2 or 3 wherein the cradle and the underside of the cap are coloured pink or red.

5. A fuel block according to Claim 2, 3 or 4 wherein the cap is reinforced by wire netting or other material.

6. A method of manufacturing fuel blocks according to Claim 2, 3, 4 or 5 consisting in forming the bottom in a mould conforming to the shape of the fireplace or space the block is intended to occupy and after setting the fuel in position therein piling a sand or like bed over it and molding the cap on the sand bed.

7. A fuel block according to any of the preceding claims wherein the fuel is partly burned before being set in position.

8. A fuel block according to any of the preceding claims wherein the fuel is coloured or treated to impart thereto a glowing or flaming appearance.

9. A fuel block according to any of the preceding claims wherein natural ash, cinders, coal dust or materials of similar appearance are applied to the surface of the foundation between the pieces of fuel.

10. Fuel blocks constructed and arranged substantially as hereinbefore described with reference to the accompanying drawings.

Dated this 2nd day of May, 1934.

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53, Queen Street, Derby.

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[This Drawing is a reproduction of the Original on a reduced scale.]

Fig. 1.

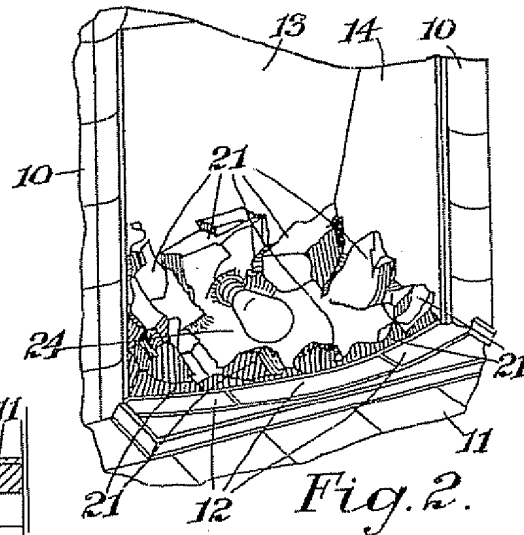
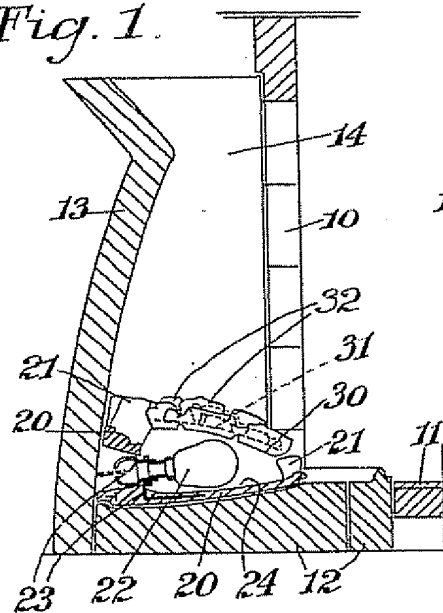


Fig. 2.

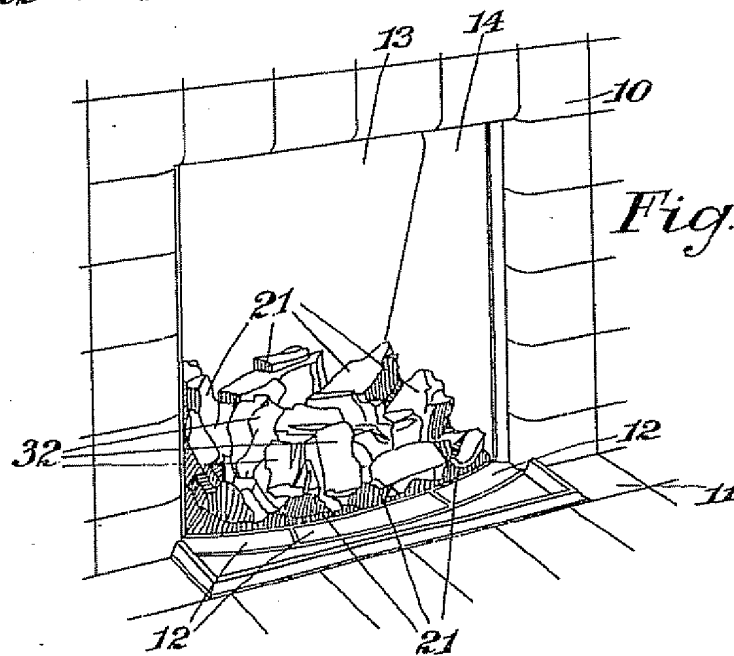


Fig. 3.

Malby & Sons Photo-Lith